

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: NOV 06 2012
API No: 47-001-03247H
Lease No: 70640;70642;070943;07094

Farm Name: BENNETT, JEREMY & BRANDY & Operator Well No. PHL4AHS (406153)
E. DOLETTA BENNETT, ET AL

LOCATION: Elevation: 1514' Quadrangle: Philippi
District: Pleasant County: Barbour
Latitude: 20,324 Feet South of: 39 Deg. 15 Min. 00 Sec.
Longitude: 2,535 Feet West of: 80 Deg. 00 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248				
Jane Lew, WV 26378				
Agent: Kent Wright				
Inspector: Bryan Harris				
Date Permit Issued: 06/30/2011				
Date Well Work Commenced: 11/03/2011	20"	40'	40'	Grouted In
Date Well Work Completed: 07/22/2012				
Verbal Plugging:	13 3/8"	613'	613'	460 sks
Date Permission granted on:				
Rotary Cable Rig X	9 5/8"	2053'	2053'	715 sks
Total Vertical Depth (feet): 7644'				
Total Measured Depth (feet): 14619'	5 1/2"	14540'	14540'	3031 sks
Fresh Water Depth (ft.): 50', 390'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s)				

OPEN FLOW DATA

Producing formation MARCELLUS Pay zone depth (ft) 7756'-14540'
Gas: Initial production 1680 MCF/d Oil: Initial open flow * Bbl/d
Final open flow 3867 MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests 8.5 Hours
Initial Flowing Pressure 4050 psig (surface pressure) after 386 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure * psig (surface pressure) after _____ Hours

*** COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

10-31-12

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2012 NOV -8 P 1:12

WELL: PHL4AHS (406153)

Were core samples taken? Yes ___ No X Were cuttings caught during drilling? Yes X No ___

Were ___ Electrical ___ Mechanical, X or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

7/5/2012 FRACED STAGE 1/22. PERFED MARCELLUS @ 14407'-14524' W/ 48 SHOTS. SAND 346,660#, AVG PSI 7740, AVG RATE 77.3.
7/6/2012 FRACED STAGE 2/22. PERFED MARCELLUS @ 14112'-14364' W/ 36 SHOTS. SAND 236,920#, AVG PSI 8628, AVG RATE 77.4.
7/7/2012 FRACED STAGE 3/22. PERFED MARCELLUS @ 13814'-14064' W/ 36 SHOTS. SAND 347,840#, AVG PSI 7889, AVG RATE 63.0.
7/7/2012 FRACED STAGE 4/22. PERFED MARCELLUS @ 13514'-13766' W/ 36 SHOTS. SAND 343,540#, AVG PSI 8365, AVG RATE 75.6.
7/8/2012 FRACED STAGE 5/22. PERFED MARCELLUS @ 13214'-13466' W/ 36 SHOTS. SAND 346,504#, AVG PSI 8313, AVG RATE 84.0.
7/9/2012 FRACED STAGE 6/22. PERFED MARCELLUS @ 12914'-13166' W/ 36 SHOTS. SAND 350,140#, AVG PSI 8641, AVG RATE 72.6.
7/15/2012 FRACED STAGE 7/22. PERFED MARCELLUS @ 12614'-12866' W/ 36 SHOTS. SAND 278,600#, AVG PSI 8585, AVG RATE 69.0.
7/16/2012 FRACED STAGE 8/22. PERFED MARCELLUS @ 12314'-12565' W/ 36 SHOTS. SAND 349,880#, AVG PSI 8596, AVG RATE 85.1.
7/17/2012 FRACED STAGE 9/22. PERFED MARCELLUS @ 12014'-12266' W/ 36 SHOTS. SAND 260,840#, AVG PSI 8107, AVG RATE 67.5.
7/18/2012 FRACED STAGE 10/22. PERFED MARCELLUS @ 11714'-11965' W/ 36 SHOTS. SAND 346,440#, AVG PSI 8182, AVG RATE 73.0.
7/19/2012 FRACED STAGE 11/22. PERFED MARCELLUS @ 11306'-11656' W/ 36 SHOTS. SAND 412,960#, AVG PSI 8520, AVG RATE 84.0.
7/19/2012 FRACED STAGE 12/22. PERFED MARCELLUS @ 10806'-10923' W/ 40 SHOTS. SAND 357,960#, AVG PSI 8505, AVG RATE 78.5.
7/20/2012 FRACED STAGE 13/22. PERFED MARCELLUS @ 10515'-10766' W/ 36 SHOTS. SAND 345,340#, AVG PSI 8516, AVG RATE 96.0.
7/20/2012 FRACED STAGE 14/22. PERFED MARCELLUS @ 10215'-10466' W/ 36 SHOTS. SAND 350,400#, AVG PSI 8640, AVG RATE 99.0.
7/20/2012 FRACED STAGE 15/22. PERFED MARCELLUS @ 9915'-10166' W/ 36 SHOTS. SAND 354,680#, AVG PSI 8579, AVG RATE 96.8.
7/20/2012 FRACED STAGE 16/22. PERFED MARCELLUS @ 9614'-9865' W/ 36 SHOTS. SAND 348,780#, AVG PSI 8523, AVG RATE 95.0.
7/21/2012 FRACED STAGE 17/22. PERFED MARCELLUS @ 9315'-9567' W/ 36 SHOTS. SAND 347,440#, AVG PSI 8331, AVG RATE 99.8.
7/21/2012 FRACED STAGE 18/22. PERFED MARCELLUS @ 9014'-9265' W/ 36 SHOTS. SAND 352,090#, AVG PSI 8686, AVG RATE 100.5.
7/21/2012 FRACED STAGE 19/22. PERFED MARCELLUS @ 8714'-8965' W/ 36 SHOTS. SAND 346,360#, AVG PSI 8690, AVG RATE 98.7.
7/22/2012 FRACED STAGE 20/22. PERFED MARCELLUS @ 8414'-8665' W/ 36 SHOTS. SAND 347,340#, AVG PSI 8717, AVG RATE 97.9.
7/22/2012 FRACED STAGE 21/22. PERFED MARCELLUS @ 8115'-8365' W/ 36 SHOTS. SAND 362,600#, AVG PSI 8483, AVG RATE 90.0.
7/22/2012 FRACED STAGE 22/22. PERFED MARCELLUS @ 7814'-8065' W/ 36 SHOTS. SAND 344,620#, AVG PSI 8630, AVG RATE 87.5.

FORMATIONS ENCOUNTERED:

Fill	0	40	Surface Rock	40	120	Sand&Shale	120	385	Sand	385	525
Sand&Shale	525	565	Shale	565	1905	RedRock Sand	1905	1965	RedRock	1965	2065
Shale	2065	2090	Sand&Shale	2090	2100	Shale Sand	2100	2120	Sandy Shale	2120	2180
RedRock	2180	2230	Sandy Shale	2230	2265	Shale	2265	2300	Sandy Shale	2300	2700
Shale	2700	4300	Sandy Shale	4300	5550	Shale	5550	7756			

GAMMA RAY/ FORMATION #PHL4AHS (406153) TOPS 47-001-03247H			
	TOP	BASE	
HOLE NOT LOGGED UNTIL KICKOFF POINT			
BURKETT	7382	7395	
TULLY	7395	7468	
LTD	14605		
FORMATION TVD AT SURFACE LOCATION			
HAMILTON	7468	7756	
MARCELLUS	7756		

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 8-10-2012
API #: 47-069-00094

Farm name: William Rodgers OHI 3H Operator Well No.: 833681

LOCATION: Elevation: 1270' Quadrangle: Valley Grove

District: Liberty County: Ohio
Latitude: 9000' Feet South of 40 Deg. 07 Min. 30 Sec.
Longitude 8620' Feet West of 80 Deg. 30 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496 Oklahoma City, OK 73154-0496	20"	120'	120'	Driven
Agent: Eric Gillespie	13 3/8"	738'	738'	773 Cu. Ft.
Inspector: Bill Hendershot & Derek Haught	9 5/8"	2145'	2145'	887 Cu. Ft.
Date Permit Issued: 8-30-2011	5 1/2"	14966'	14966'	3896 Cu. Ft.
Date Well Work Commenced: 12-4-2011				
Date Well Work Completed: 5-16-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6580' (cement plug 5643'-6543')				
Total Measured Depth (ft): 14966'				
Fresh Water Depth (ft.): 79', 300'				
Salt Water Depth (ft.): 1189'				
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.): 664'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,856'-14,833'
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 1,817* MCF/d Final open flow 141 Bbl/d
Time of open flow between initial and final tests 67 Hours *Calculated
Static rock Pressure 4,215* psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

8-29-2012
Date

FILED
AUG 30 2012
WV Department of
Environmental Protection

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR, neutron, density, and resistivity
open hole logs run from 0-6580' MD; LWD GR from 5815-14966' MD.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s): Cement plug @ 5643' - 6543'

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See Attached)

STATE OF MISSISSIPPI
DEPARTMENT OF REVENUE

AUG 30 2012

WV Department of

Revenue

PERFORATION RECORD ATTACHMENT

Well Number and Name: 833681 William Rodgers OHI 3H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated		Fluid		Propping Agent		Average Injection
	From	To		From	To	Type	Amount	Type	Amount	
4/12/2012	14,418	14,833	5/6/2012	14,418	14,833	Sik wtr	10,042	Sand	495,940	80.0
5/6/2012	13,732	14,322	5/8/2012	13,732	14,322	Sik wtr	13,838	Sand	662,480	80.0
5/8/2012	13,044	13,634	5/8/2012	13,044	13,634	Sik wtr	12,610	Sand	663,180	77.0
5/8/2012	12,357	12,946	5/8/2012	12,357	12,946	Sik wtr	12,528	Sand	665,000	77.0
5/9/2012	11,665	12,256	5/12/2012	11,665	12,256	Sik wtr	12,306	Sand	666,820	80.0
5/12/2012	10,982	11,571	5/12/2012	10,982	11,571	Sik wtr	13,390	Sand	663,420	79.0
5/12/2012	10,294	10,887	5/13/2012	10,294	10,887	Sik wtr	12,673	Sand	663,240	80.0
5/13/2012	9,606	10,195	5/13/2012	9,606	10,195	Sik wtr	12,284	Sand	663,400	80.0
5/13/2012	8,919	9,508	5/13/2012	8,919	9,508	Sik wtr	12,005	Sand	663,620	80.0
5/13/2012	8,231	8,820	5/15/2012	8,231	8,820	Sik wtr	12,567	Sand	663,560	79.0
5/15/2012	7,543	8,132	5/15/2012	7,543	8,132	Sik wtr	11,742	Sand	665,720	79.0
5/15/2012	6,856	7,445	5/16/2012	6,856	7,445	Sik wtr	11,718	Sand	664,800	79.0

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VERTICAL PILOT HOLE

Formation/Lithology	Top Depth, TVD/MD (ft)	Bottom Depth, TVD/MD (ft)
LS/SH	0	580
SS/LS	580	660
PITTSBURG COAL	660	670
LS/SH/SS	670	760
SS	760	1030
SH/SS	1030	1180
SS	1180	1780
BIG INJUN (SS)	1780	1988
SHALE	1988	6326
GENESEO (SH)	6326	6349
TULLY (LS)	6349	6381
HAMILTON (SH)	6381	6495
MARCELLUS (SH)	6495	6564
ONONDAGA (LS)	6564	
TD OF PILOT HOLE		6580

LATERAL SIDETRACK WELLBORE

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SH	0	0	580	580
SS/LS	580	580	660	660
PITTSBURG COAL	660	660	670	670
LS/SH/SS	670	670	760	760
SS	760	760	1030	1030
SH/SS	1030	1030	1180	1180
SS	1180	1180	1780	1780
BIG INJUN (SS)	1780	1780	1988	1988
SHALE	2031	2031	6347	6336
GENESEO (SH)	6347	6336	6365	6353
TULLY (LS)	6365	6353	6400	6385
HAMILTON (SH)	6400	6385	6564	6506
MARCELLUS (SH)	6564	6506		
TD OF LATERAL			14966	6429

JOHN J. ...
 ...
 ...

AUG 30 2012

WV Department of
 Environmental Protection

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 8-10-2012
API #: 47-069-00095

Farm name: William Rodgers OHI 8H

Operator Well No.: 834660

LOCATION: Elevation: 1270'

Quadrangle: Valley Grove

District: Liberty

County: Ohio

Latitude: 9000' Feet South of 40 Deg. 07 Min. 30 Sec.

Longitude 8630' Feet West of 80 Deg. 30 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	13 3/8"	714'	714'	718 Cu. Ft.
Agent: Eric Gillespie	9 5/8"	2143'	2143'	1083 Cu. Ft.
Inspector: Bill Hendershot & Derek Haught	5 1/2"	15843'	15843'	4064 Cu. Ft.
Date Permit Issued: 11-16-2011				
Date Well Work Commenced: 12-14-2011				
Date Well Work Completed: 5-7-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6666'				
Total Measured Depth (ft): 15844'				
Fresh Water Depth (ft.): 79', 300'				
Salt Water Depth (ft.): 1189'				
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.): 664'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,714'-15,710'

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow 1,694* MCF/d Final open flow 138 - Bbl/d

Time of open flow between initial and final tests 72 Hours *Calculated

Static rock Pressure 4,334* psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Maureen Williams
Signature

8-27-2012
Date

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OIL & GAS DIVISION
AUG 20 2012

WV Department of
Environmental Protection

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR MWD from 5,957'-15,844' MD
MUDLOG FROM 0-15,844' MD

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See Attached)


APPROVED FOR
SUBMITTAL TO THE
STATE OF MONTANA
AUG 30 2012

AUG 30 2012
WVD Department of
Environmental Protection

PERFORATION RECORD ATTACHMENT

Well Number and Name: 834660 William Rodgers OHI 8H

PERFORATION RECORD			STIMULATION RECORD							
Interval Perforated						Fluid		Propping Agent		Average Injection
Date	From	To	Date	Interval	Treated	Type	Amount	Type	Amount	
4/9/2012	15,154	15,710	5/6/2012	15,154	15,710	Sik wtr	11,878	Sand	640,840	80.0
5/6/2012	14,506	15,076	5/6/2012	14,506	15,076	Sik wtr	16,632	Sand	645,060	79.7
5/7/2012	13,856	14,427	5/7/2012	13,856	14,427	Sik wtr	12,613	Sand	642,800	80.0
5/7/2012	13,207	13,777	5/7/2012	13,207	13,777	Sik wtr	11,711	Sand	642,880	80.0
5/8/2012	12,558	13,128	5/10/2012	12,558	13,128	Sik wtr	11,915	Sand	642,360	80.0
5/10/2012	11,909	12,479	5/10/2012	11,909	12,479	Sik wtr	11,889	Sand	641,820	80.0
5/10/2012	11,257	11,830	5/10/2012	11,257	11,830	Sik wtr	12,124	Sand	643,320	80.0
5/10/2012	10,610	11,178	5/11/2012	10,610	11,178	Sik wtr	13,251	Sand	641,640	80.0
5/11/2012	9,961	10,531	5/11/2012	9,961	10,531	Sik wtr	11,828	Sand	643,560	80.0
5/11/2012	9,316	9,882	5/14/2012	9,316	9,882	Sik wtr	11,923	Sand	643,560	78.0
5/14/2012	8,662	9,232	5/14/2012	8,662	9,232	Sik wtr	11,298	Sand	642,460	80.0
5/14/2012	8,013	8,583	5/16/2012	8,013	8,583	Sik wtr	11,708	Sand	639,860	80.0
5/16/2012	7,364	7,934	5/16/2012	7,364	7,934	Sik wtr	11,426	Sand	645,160	80.0
5/16/2012	6,714	7,285	5/17/2012	6,714	7,285	Sik wtr	11,376	Sand	650,180	79.0


 William Rodgers
 California, S. Cal.

AUG 30 2012

WVD Department of
 Environmental Protection on

**LATERAL SIDETRACK
WELLBORE**

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SH	0	0	580	580
SS/LS	580	580	660	660
PITTSBURG COAL	660	660	670	670
LS/SH/SS	670	670	760	760
SS	760	760	1030	1030
SH/SS	1030	1030	1180	1180
SS	1180	1180	1780	1780
BIG INJUN (SS)	1780	1780	1988	1988
SHALE	2031	2031	6346	6331
GENESEO (SH)	6346	6331	6371	6351
TULLY (LS)	6371	6351	6418	6391
HAMILTON (SH)	6418	6391	6578	6501
MARCELLUS (SH)	6578	6501		
TD OF LATERAL			15844	6666

per 10-2010-00000
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 Office of Oil & Gas

AUG 30 2012

WV Department of
 Environmental Protection

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 8-22-2012
API #: 47-069-00100

Farm name: Deborah Craig OHI 3H Operator Well No.: 833806

LOCATION: Elevation: 1331' Quadrangle: Valley Grove

District: Tridelphia County: Ohio
Latitude: 400' Feet South of 40 Deg. 05 Min. 00 Sec.
Longitude 12940' Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496		20"	126'	126'	Driven
Agent:	Eric Gillespie	13 3/8"	739'	739'	729 Cu. Ft.
Inspector:	Bill Hendershot	9 5/8"	2295'	2295'	1021 Cu. Ft.
Date Permit Issued:	11-16-2011	5 1/2"	13947'	13947'	2851 Cu. Ft.
Date Well Work Commenced:	3-23-2012				
Date Well Work Completed:	6-5-2012				
Verbal Plugging:					
Date Permission granted on:					
Rotary <input checked="" type="checkbox"/>	Cable <input type="checkbox"/>	Rig <input type="checkbox"/>			
Total Vertical Depth (ft):	6537'(cement plug@ 5663' - 6512')				
Total Measured Depth (ft):	13950'				
Fresh Water Depth (ft.):	82', 350'				
Salt Water Depth (ft.):	1520'				
Is coal being mined in area (N/Y)?	N				
Coal Depths (ft.):	683'				
Void(s) encountered (N/Y) Depth(s)	N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,950'-13,814'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow Not Tested MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

RECEIVED
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AUG 29 2012

WV Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene W. Leckman
Signature

8-28-2012
Date

Were core samples taken? Yes _____ No N

Were cuttings caught during drilling? Yes Y No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR, neutron, density, and resistivity
open hole logs run from 0-2318' MD; LWD GR from 5662-13950' MD.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s): Cement plug @ 5663' - 6512'

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

(See Attached)

PAID
Coke & Oil Co.

AUG 29 2012

WV Department of
Environmental Protection

PERFORATION RECORD ATTACHMENT

Well Number and Name: 833806 Deborah Craig OHI 3H

PERFORATION RECORD			STIMULATION RECORD							
	Interval Perforated					Fluid		Propping Agent		Average Injection
Date	From	To	Date	Interval Treated		Type	Amount	Type	Amount	
5/20/2012	13,271	13,814	6/1/2012	13,271	13,814	Sik wtr	11,450	Sand	629,800	83
6/1/2012	12,646	13,182	6/1/2012	12,646	13,182	Sik wtr	12,275	Sand	630,780	85
6/1/2012	12,012	12,550	6/2/2012	12,012	12,550	Sik wtr	11,468	Sand	630,640	84
6/2/2012	11,375	11,918	6/2/2012	11,375	11,918	Sik wtr	11,695	Sand	621,800	82
6/2/2012	10,743	11,286	6/2/2012	10,743	11,286	Sik wtr	11,631	Sand	631,300	84
6/2/2012	10,110	10,654	6/3/2012	10,110	10,654	Sik wtr	11,642	Sand	631,380	85
6/3/2012	9,478	10,021	6/3/2012	9,478	10,021	Sik wtr	11,189	Sand	630,580	86
6/3/2012	8,851	9,389	6/4/2012	8,851	9,389	Sik wtr	12,703	Sand	629,080	85
6/4/2012	8,219	8,757	6/4/2012	8,219	8,757	Sik wtr	10,963	Sand	630,980	86
6/4/2012	7,587	8,125	6/4/2012	7,587	8,125	Sik wtr	11,341	Sand	630,920	85
6/5/2012	6,950	7,493	6/5/2012	6,950	7,493	Sik wtr	11,004	Sand	646,780	85

Produced Pursuant to
 Ohio Public Records Act

AUG 29 2012

WV Department of
 Environmental Protection

LATERAL SIDETRACK WELLBORE (no vertical pilot hole associated with this well)

Maximum TVD of wellbore: 6537 ft TVD @ 6990 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	683	683
PITTSBURG COAL	683	683	690	690
LS	690	690	840	840
SS	840	840	990	990
SS/SH	990	990	1770	1770
BIG LIME (LS)	1770	1770	1820	1820
BIG INJUN (SS)	1820	1820	2057	2057
SHALE	2057	2057	6446	6344
GENESEO (SH)	6446	6344	6474	6362
TULLY (LS)	6474	6362	6528	6396
HAMILTON (SH)	6528	6396	6759	6502
MARCELLUS (SH)	6759	6502		
TD OF LATERAL			13950	6443

PAID BY PERMIT
CASH ON DELIVERY

AUG 29 2012

NY Department of
Environmental Conservation

WR-35
Rev (8-10)

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 5/11/11
API #: 47-7700105 W

Farm name: Messinger Limited Partner Operator Well No.: Terra Alta South 7513

LOCATION: Elevation: 1882 Quadrangle: Aurora

District: Union County: Preston
Latitude: 9260 Feet South of 39 Deg. 22 Min. 30 Sec.
Longitude 9870 Feet West of 79 Deg. 35 Min. 00 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Columbia Gas Transmission 1703 MacCorkle Ave SE Charleston, WV 25325-1273	11-3/4	97	97	31 sx
Agent: <u>Paul Amick</u>	8-5/8	980	980	190 sx
Inspector: <u>Sam Ward</u>	4-1/2	5464	5464	102 sx
Date Permit Issued: <u>11/3/10</u>				
Date Well Work Commenced: <u>7/1/10</u>				
Date Well Work Completed: <u>4/20/11</u>				
Verbal Plugging: <u>NA</u>				
Date Permission granted on: <u>NA</u>				
Rotary <u>Y</u> Cable <u>Y</u> Rig <u>Y</u>				
Total Vertical Depth (ft): <u>no telemetry</u>				
Total Measured Depth (ft): <u>5539</u>				
Fresh Water Depth (ft.): <u>none reported</u>				
Salt Water Depth (ft.): <u>none reported</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>none reported</u>				
Void(s) encountered (N/Y) Depth(s) <u>none rptd</u>				

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Environmental Protection

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Chart / Oriskany commingled Pay zone depth (ft) 5169 - 5394

Gas: Initial open flow NA MCF/d Oil: Initial open flow NA Bbl/d

Final open flow 2300 MCF/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests NA Hours

Static rock Pressure 1480 psig (surface pressure) after 24 Hours

Second producing formation Pay zone depth (ft)

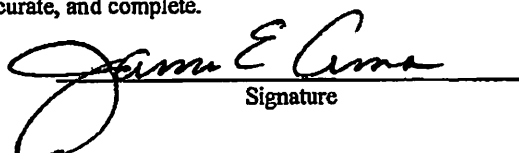
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.


Signature

5/11/11
Date

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No NA

Were Y Electrical, N Mechanical, N or Geophysical logs recorded on this well?
Y/N Y/N Y/N

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

Pre-existing perforations: 4990 - 91 ft (sqz); 5169 - 89; 5303 - 07; 5376 - 94

New perforations: 4/16/11 - reperforated 5303 - 07 ft during permitted rework

Acid Stim: 2000 gals HCl acid, 75 bbls FW, Avg BH rate = 1.1 BPM, ATP=2600 psig

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____
Surface: _____

Note that this is an existing storage well drilled in 1962. During rework, no additional borehole was drilled.

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WV Department of
Environmental Protection

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 10-30-2012
API #: 47-069-00124

Farm name: Melvin Kahle OHI 3H

Operator Well No.: 834929

LOCATION: Elevation: 1280'

Quadrangle: Wheeling WV

District: Triadelphia

County: Ohio

Latitude: 90' Feet South of 40 Deg. 05 Min. 00 Sec.

Longitude 4180' Feet West of 80 Deg. 37 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>P.O. Box 18496</u>				
<u>Oklahoma City, OK 73154-0496</u>	<u>20"</u>	<u>110'</u>	<u>110'</u>	<u>269 Cu. Ft.</u>
Agent: <u>Eric Gillespie</u>	<u>13 3/8"</u>	<u>649'</u>	<u>649'</u>	<u>634 Cu. Ft.</u>
Inspector: <u>Bill Hendershot</u>	<u>9 5/8"</u>	<u>2116'</u>	<u>2116'</u>	<u>926 Cu. Ft.</u>
Date Permit Issued: <u>5-23-2012</u>	<u>5 1/2"</u>	<u>12750'</u>	<u>12750'</u>	<u>2672 Cu. Ft.</u>
Date Well Work Commenced: <u>6-10-2012</u>				
Date Well Work Completed: <u>8-2-2012</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>6306'</u>				
Total Measured Depth (ft): <u>12752'</u>				
Fresh Water Depth (ft.): <u>155'</u>				
Salt Water Depth (ft.): <u>1100'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>597' (VOID)</u>				
Void(s) encountered (N/Y) Depth(s) <u>Y 607'</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,700'-12,611'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow Not Tested MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

11-1-2012
Date

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Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list GR MWD from 5,306'-12,699' MD

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See attached)

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See attached)

LATERAL WELLBORE (no vertical pilot hole associated with this well)

Maximum TVD of wellbore: 6306 ft TVD @ 6883 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS	0	0	597	597
PITTSBURG COAL (VOID)	597	597	609	609
SH/LS	609	609	750	750
SS/SH	750	750	880	880
REDBEDS	880	880	900	900
SHALE	900	900	1040	1040
SS	1040	1040	1590	1590
BIG INJUN (SS)	1590	1590	1970	1970
SHALE	1970	1970	6165	6118
GENESEO (SH)	6165	6118	6190	6135
TULLY (LS)	6190	6135	6264	6180
HAMILTON (SH)	6264	6180	6495	6273
MARCELLUS (SH)	6495	6273		
TD OF LATERAL			12752	6226

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 4-5-2012
API #: 47-097-03514

Farm name: Arthur Chidester 1H Operator Well No.: 626748

LOCATION: Elevation: 1900' Quadrangle: Rock Cave

District: Banks County: Upshur
Latitude: 11.600' Feet South of 38 Deg. 50 Min. 00 Sec.
Longitude 14.750' Feet West of 80 Deg. 17 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
<u>P.O. Box 18496</u>				
<u>Oklahoma City, OK 73154-0496</u>	<u>13 3/8"</u>	<u>600'</u>	<u>600'</u>	<u>673 Cu. Ft.</u>
Agent: <u>Eric Gillespie</u>	<u>9 5/8"</u>	<u>1926'</u>	<u>1926'</u>	<u>5052 Cu. Ft.</u>
Inspector: <u>Bill Hendershot</u>	<u>7"</u>	<u>7356'</u>	<u>7356'</u>	<u>915 Cu. Ft.</u>
Date Permit Issued: <u>6-11-2009</u>	<u>4 1/2"</u>	<u>10646'</u>	<u>10646'</u>	<u>477 Cu. Ft.</u>
Date Well Work Commenced: <u>12-7-2009</u>				
Date Well Work Completed: <u>10-25-2010</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): <u>7136'</u>				
Total Measured Depth (ft): <u>10646'</u>				
Fresh Water Depth (ft.): <u>499'</u>				
Salt Water Depth (ft.): <u>None</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>499'-501', 999'</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7,273' - 10,455'
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 2,245* MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 42 Hours *Calculated
Static rock Pressure 3,194* psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

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I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

8-29-2012
Date

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____
Resistivity, Nuclear, Sonic, and Borehole Image in the vertical and curve, MWD GR in the lateral.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

Formations on attached document.

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AUG 30 2012
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OFFICE OF THE REGISTRAR

AUG 30 2012

WV Department of
Environmental Protection
or

PERFORATION RECORD ATTACHMENT

Well Number and Name: 626748 Arthur Chidester 1H

PERFORATION RECORD			STIMULATION RECORD							
Date	Interval Perforated		Date	Interval Treated	Type	Fluid		Propping Agent		Average Injection
	From	To				Amount	Type	Amount		
8/7/2010	10213	10455	10/16/2010	10213	10455	Sik wtr	8165	Sand	303325	84
10/16/2010	9913	10155	10/16/2010	9913	10155	Sik wtr	7979	Sand	305123	82
10/16/2010	9613	9855	10/17/2010	9613	9855	Sik wtr	7932	Sand	302240	82
10/17/2010	9313	9555	10/18/2010	9313	9555	Sik wtr	7537	Sand	314749	85
10/18/2010	9013	9255	10/19/2010	9013	9255	Sik wtr	7360	Sand	305980	86
10/19/2010	8773	8955	10/20/2010	8773	8955	Sik wtr	6736	Sand	250646	91
10/21/2010	8473	8715	10/21/2010	8473	8715	Sik wtr	7384	Sand	301000	86
10/21/2010	8173	8415	10/22/2010	8173	8415	Sik wtr	7444	Sand	306900	89
10/23/2010	7873	8115	10/24/2010	7873	8115	Sik wtr	7137	Sand	297000	91
10/24/2010	7573	7815	10/24/2010	7573	7815	Sik wtr	7107	Sand	303066	91
10/24/2010	7273	7515	10/25/2010	7273	7515	Sik wtr	7302	Sand	320300	91

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 Environmental Protection

LATERAL WELLBORE**Maximum TVD of wellbore:** 7136 ft TVD @ 8797 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SS/SHALE	0	0	1476	1476
LS	1476	1476	1714	1714
SS	1714	1714	1917	1917
SHALE	1917	1917	6889	6890
GENESEO	6899	6890	6951	6935
TULLY	6951	6935	6969	6950
HAMILTON	6969	6950	7086	7035
MARCELLUS	7086	7035	10646	7097
TD	10646	7097		0

BIRMINGHAM, AL

AUGUST 30, 2012

AUG 30 2012

WV Department of
Environmental Protection

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Edward Gower 8HOperator Well No.: 831386

LOCATION Elevation: 1594'
District: Warren
Latitude: 10670 ft South of 39° 02' 30"
Longitude: 6620 ft West of 80° 12' 30"

Quadrangle: Century
County: Upshur

Company: Chesapeake Appalachia, L.L.C.
P.O. Box 18496
OKC, OK 73154-0496

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill-Up Cu.Ft.
20"	40'	40'	Driven
13 3/8"	529'	529'	CTS
9 5/8"	2084'	2084'	CTS
5 1/2"	12,466'	12,466'	As needed

Agent: Eric Gillespie
Inspector: Bill Hatfield
Date Permit Issued: 10/15/2009
Date Well work commenced: 3/3/2010
Date Well Work completed: 9/28/2010
Verbal Plugging Permission
Granted on / /
Rotary ☒ Cable ☐ Rig
Total Depth (ft): 12466 TVD (ft): 7700'
Fresh Water Depth (ft): 425'
Salt Water Depth (ft.): NA
Is coal being mined in area (Yes ☐ No ☒
Coal Depths (ft): none
Was this well logged and plugged back?
Yes ☐ No ☐ if yes -
depth cement plug set _____

Open Flow Data

1st Producing Formation Pay Zone Depth 7,998 ft to 12,320 ft

Gas:	Initial Open Flow	2,439 Mcf/day	Oil:	Initial Open Flow	bbl/day
	Final Open Flow	N/A Mcf/day		Final Open Flow	bbl/day
	Time of Open Flow between Initial and Final Tests	In Line		hours	
	Static Rock Pressure	3,465 psig after N/A		hours	

2nd Producing Formation Pay Zone Depth ft to ft

Gas:	Initial Open Flow	N/A Mcf/day	Oil:	Initial Open Flow	bbl/day
	Final Open Flow	N/A Mcf/day		Final Open Flow	bbl/day
	Time of Open Flow between Initial and Final Tests			hours	
	Static Rock Pressure	N/A psig after		hours	

3rd Producing Formation Pay Zone Depth ft to ft

Gas:	Initial Open Flow	N/A Mcf/day	Oil:	Initial Open Flow	bbl/day
	Final Open Flow	N/A Mcf/day		Final Open Flow	bbl/day
	Time of Open Flow between Initial and Final Tests			hours	
	Static Rock Pressure	N/A psig after		hours	

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

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Perforated Intervals

1 st Stage	Marcellus	50	holes from	11,998 ft to	12,320 ft
2 nd Stage	Marcellus	50	holes from	11,598 ft to	11,920 ft
3 rd Stage	Marcellus	50	holes from	11,198 ft to	11,520 ft
4 th Stage	Marcellus	50	holes from	10,798 ft to	11,120 ft
5 th Stage	Marcellus	50	holes from	10,394 ft to	10,720 ft
6 th Stage	Marcellus	50	holes from	9,998 ft to	10,320 ft
7 th Stage	Marcellus	50	holes from	9,598 ft to	9,920 ft
8 th Stage	Marcellus	50	holes from	9,198 ft to	9,520 ft
9 th Stage	Marcellus	50	holes from	8,798 ft to	9,120 ft
10 th Stage	Marcellus	50	holes from	8,398 ft to	8,716 ft
11 th Stage	Marcellus	50	holes from	7,998 ft to	8,313 ft

Fracturing / Stimulation

1 st Stage	Type of Treatment Slickwater		
	Total Acid 5,000 Gal of 15% HCl	Breakdown Pressure 7,039 psi	
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,845 psi MTP 8,577 psi	
	Total Fluid 10,239 bbl	Total Nitrogen 0 scf	Total Sand 124,426 lb of 100 mesh
			Total Sand 205,144 lb of 30/50
	ISIP 4,950 psi	5 min 4,700 psi	
2 nd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,270 psi	
	Average Rate 93 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 8,644 psi MTP 9,456 psi	
	Total Fluid 8,586 bbl	Total Nitrogen 0 scf	Total Sand 120,500 lb of 100 mesh
			Total Sand 228,500 lb of 30/50
	ISIP 5,141 psi	5 min 4,580 psi	
3 rd Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,100 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,879 psi MTP 8,657 psi	
	Total Fluid 8,289 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 241,500 lb of 30/50
	ISIP 5,218 psi	5 min 4,806 psi	
4 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,589 psi	
	Average Rate 96 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,233 psi MTP 8,562 psi	
	Total Fluid 8,222 bbl	Total Nitrogen 0 scf	Total Sand 122,000 lb of 100 mesh
			Total Sand 204,700 lb of 30/50
	ISIP 5,029 psi	5 min 4,670 psi	
5 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,014 psi	
	Average Rate 85 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,310 psi MTP 8,300 psi	
	Total Fluid 9,924 bbl	Total Nitrogen 0 scf	Total Sand 121,200 lb of 100 mesh
			Total Sand 280,600 lb of 30/50
	ISIP 5,184 psi	5 min 4,678 psi	
6 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,423 psi	
	Average Rate 90 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,262 psi MTP 8,297 psi	
	Total Fluid 8,476 bbl	Total Nitrogen 0 scf	Total Sand 121,400 lb of 100 mesh
			Total Sand 279,000 lb of 30/50
	ISIP 0 psi	5 min psi	

7 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 5,685 psi	
	Average Rate 99 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,572 psi	MTP 7,808 psi
	Total Fluid 8,632 bbl	Total Nitrogen 0 scf	Total Sand 120,116 lb of 100 mesh
			Total Sand 264,922 lb of 30/50
	ISIP 4,972 psi	5 min 4,972 psi	
8 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,672 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,640 psi	MTP 8,363 psi
	Total Fluid 8,415 bbl	Total Nitrogen 0 scf	Total Sand 121,200 lb of 100 mesh
			Total Sand 282,800 lb of 30/50
	ISIP 5,302 psi	5 min 5,302 psi	
9 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 7,994 psi	
	Average Rate 84 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,520 psi	MTP 8,725 psi
	Total Fluid 8,519 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 282,600 lb of 30/50
	ISIP 5,148 psi	5 min 5,148 psi	
10 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,422 psi	
	Average Rate 86 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,578 psi	MTP 8,341 psi
	Total Fluid 8,502 bbl	Total Nitrogen 0 scf	Total Sand 121,440 lb of 100 mesh
			Total Sand 291,000 lb of 30/50
	ISIP 5,405 psi	5 min 5,405 psi	
11 th Stage	Type of Treatment Slickwater		
	Total Acid 2,500 Gal of 15% HCl	Breakdown Pressure 6,121 psi	
	Average Rate 87 scf/min <input type="checkbox"/> or bpm <input checked="" type="checkbox"/>	ATP 7,778 psi	MTP 8,230 psi
	Total Fluid 8,299 bbl	Total Nitrogen 0 scf	Total Sand 120,000 lb of 100 mesh
			Total Sand 272,900 lb of 30/50
	ISIP 5,426 psi	5 min 5,426 psi	

Well Log

Formation Name	Top	Bottom	Comments
SS/LS	0	600	All depths KBTVD
SHALE W/ SS	600	830	
SS/SH	830	1782	
BIG LIME	1782	1960	
BIG INJUN	1960	2020	
SHALE	2020	2160	
SS W/ SILTSTONE	2160	2340	
SHALE W/ SS	2340	3260	
SHALE	3260	7490	
GENESEO	7490	7525	
TULLY	7525	7560	
HAMILTON	7560	7663	
MARCELLUS	7663		
TD		7701	

Signed:

Marlene Williams

CHESAPEAKE APPALACHIA, LLC

By: Marlene Williams, Regulatory Analyst II

Date: 10-31-2012

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: NOV 06 2012
API No: 47-001-03248H
Lease No: 70640; 70642; 070943; 070943

Farm Name: BENNETT, JEREMY & BRANDY & Operator Well No. PHL4BHS (406155)
E. DOLETTA BENNETT, ET AL

LOCATION: Elevation: 1514'

Quadrangle: Philippi

District: Pleasant

County: Barbour

Latitude: 20,823 Feet South of: 39 Deg. 15 Min. 00 Sec.
Longitude: 3,005 Feet West of: 80 Deg. 00 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248				
Jane Lew, WV 26378				
Agent: Kent Wright				
Inspector: Bryan Harris				
Date Permit Issued: 06/30/2011				
Date Well Work Commenced: 11/15/2011	20"	40'	40'	Grouted In
Date Well Work Completed: 07/25/2012				
Verbal Plugging:	13 3/8"	611'	611'	400 sks
Date Permission granted on:				
Rotary Cable Rig X	9 5/8"	2023'	2023'	650 sks
Total Vertical Depth (feet): 7654'				
Total Measured Depth (feet): 15266'	5 1/2"	15235'	15235'	3191 sks
Fresh Water Depth (ft.): 50', 390'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s)				

OPEN FLOW DATA

Producing formation MARCELLUS Pay zone depth (ft) 7756'-15235'
Gas: Initial production 1920 MCF/d Oil: Initial open flow * Bbl/d
Final open flow 2112 MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests 8 Hours
Initial Flowing Pressure 5150 psig (surface pressure) after 535.50 Hours

Second Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock Pressure * psig (surface pressure) after * Hours

*** COMMINGLED WITH PREVIOUS FORMATIONS**

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature

Date

10-31-12

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WELL: **PHL4BHS (406155)**

Were core samples taken? Yes ☐ No ☒ Were cuttings caught during drilling? Yes ☒ No ☐
Were ☐ Electrical ☐ Mechanical, ☒ or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

7/13/2012 FRACED STAGE 1/24. PERFED MARCELLUS @ 15104'-15346' W/ 40 SHOTS. SAND 346,100#, AVG PSI 8311, AVG RATE 62.4.
7/13/2012 FRACED STAGE 2/24. PERFED MARCELLUS @ 14804'-15046' W/ 40 SHOTS. SAND 288,840#, AVG PSI 8588, AVG RATE 73.1.
7/13/2012 FRACED STAGE 3/24. PERFED MARCELLUS @ 14504'-14746' W/ 40 SHOTS. SAND 350,720#, AVG PSI 8645, AVG RATE 72.0.
7/14/2012 FRACED STAGE 4/24. PERFED MARCELLUS @ 14204'-14446' W/ 40 SHOTS. SAND 349,680#, AVG PSI 8574, AVG RATE 75.4.
7/14/2012 FRACED STAGE 5/24. PERFED MARCELLUS @ 13904'-14146' W/ 40 SHOTS. SAND 350,400#, AVG PSI 8688, AVG RATE 69.5.
7/15/2012 FRACED STAGE 6/24. PERFED MARCELLUS @ 13604'-13846' W/ 40 SHOTS. SAND 351,900#, AVG PSI 8585, AVG RATE 71.4.
7/15/2012 FRACED STAGE 7/24. PERFED MARCELLUS @ 13304'-13542' W/ 40 SHOTS. SAND 349,900#, AVG PSI 8526, AVG RATE 64.5.
7/15/2012 FRACED STAGE 8/24. PERFED MARCELLUS @ 13064'-13246' W/ 40 SHOTS. SAND 346,740#, AVG PSI 8497, AVG RATE 67.1.
7/16/2012 FRACED STAGE 9/24. PERFED MARCELLUS @ 12704'-12946' W/ 40 SHOTS. SAND 274,440#, AVG PSI 8624, AVG RATE 76.3.
7/17/2012 FRACED STAGE 10/24. PERFED MARCELLUS @ 12404'-12646' W/ 40 SHOTS. SAND 330,260#, AVG PSI 8565, AVG RATE 77.9.
7/18/2012 FRACED STAGE 11/24. PERFED MARCELLUS @ 12104'-12346' W/ 40 SHOTS. SAND 344,040#, AVG PSI 8542, AVG RATE 84.9.
7/19/2012 FRACED STAGE 12/24. PERFED MARCELLUS @ 11722'-12037' W/ 40 SHOTS. SAND 413,220#, AVG PSI 8434, AVG RATE 82.3.
7/20/2012 FRACED STAGE 13/24. PERFED MARCELLUS @ 11214'-11333' W/ 40 SHOTS. SAND 351,500#, AVG PSI 8631, AVG RATE 83.0.
7/23/2012 FRACED STAGE 14/24. PERFED MARCELLUS @ 10920'-11171' W/ 40 SHOTS. SAND 350,140#, AVG PSI 8585, AVG RATE 93.3.
7/23/2012 FRACED STAGE 15/24. PERFED MARCELLUS @ 10619'-10870' W/ 40 SHOTS. SAND 350,890#, AVG PSI 8446, AVG RATE 91.0.
7/23/2012 FRACED STAGE 16/24. PERFED MARCELLUS @ 10319'-10570' W/ 40 SHOTS. SAND 353,160#, AVG PSI 8620, AVG RATE 96.3.
7/23/2012 FRACED STAGE 15/24. PERFED MARCELLUS @ 10019'-10270' W/ 40 SHOTS. SAND 346,200#, AVG PSI 8284, AVG RATE 99.8.
7/24/2012 FRACED STAGE 16/24. PERFED MARCELLUS @ 9719'-9970' W/ 40 SHOTS. SAND 343,500#, AVG PSI 8417, AVG RATE 100.2.
7/25/2012 FRACED STAGE 17/24. PERFED MARCELLUS @ 9420'-9672' W/ 40 SHOTS. SAND 350,600#, AVG PSI 8490, AVG RATE 95.4.
7/24/2012 FRACED STAGE 18/24. PERFED MARCELLUS @ 9120'-9372' W/ 40 SHOTS. SAND 350,880#, AVG PSI 8495, AVG RATE 88.0.
7/24/2012 FRACED STAGE 19/24. PERFED MARCELLUS @ 8820'-9071' W/ 40 SHOTS. SAND 315,940#, AVG PSI 8751, AVG RATE 95.8.
7/24/2012 FRACED STAGE 20/24. PERFED MARCELLUS @ 8520'-8770' W/ 40 SHOTS. SAND 363,780#, AVG PSI 8362, AVG RATE 99.3.
7/25/2012 FRACED STAGE 23/24. PERFED MARCELLUS @ 8315'-8477' W/ 40 SHOTS. SAND 363,800#, AVG PSI 8429, AVG RATE 85.0.
7/25/2012 FRACED STAGE 24/24. PERFED MARCELLUS @ 8117'-8277' W/ 40 SHOTS. SAND 363,040#, AVG PSI 8683, AVG RATE 85.5.

FORMATIONS ENCOUNTERED:

Fill	0	40	Surface Rock	40	120	Sand&Shale	120	385	Sand	385	525
Sand&Shale	525	565	Shale	565	1905	RedRock Sand	1905	1965	RedRock	1965	2065
Shale	2065	2090	Sand&Shale	2090	2100	Shale Sand	2100	2120	Sandy Shale	2120	2180
RedRock	2180	2230	Sandy Shale	2230	2265	Shale	2265	2300	Sandy Shale	2300	2700
Shale	2700	4300	Sandy Shale	4300	5550	Shale	5550	7756			

<u>GAMMA RAY / FORMATION</u>			
#PHL4BHS (406155)		TOPS	
		47-001-03248H	
	TOP	BASE	
FORMATION TVD AT SURFACE LOCATION			
BURKETT	7382	7395	
TULLY	7395	7468	
MARCELLUS	7756		
LTD	15254		
HOLE NOT LOGGED UNTIL KICKOFF POINT			
HAMILTON	7468	7756	

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

DATE: NOV 06 2012
API No: 47-001-03249H
Lease No: 070943; 70640; 70642; 070943;
071088

Well Operator's Report of Well Work

Farm Name: BENNETT, JEREMY & BRANDY & Operator Well No. PHL4CHS (406157)
E. DOLETTA BENNETT, ET AL

LOCATION: Elevation: 1514'

Quadrangle: Philippi

District: Pleasant

County: Barbour

Latitude: 21,261 Feet South of: 39 Deg. 15 Min. 00 Sec.

Longitude: 3,503 Feet West of: 80 Deg. 00 Min. 00 Sec.

Company: CNX Gas Company LLC

	Casing and Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: P.O. Box 1248				
Jane Lew, WV 26378				
Agent: Kent Wright				
Inspector: Bryan Harris				
Date Permit Issued: 06/30/2011				
Date Well Work Commenced: 11/30/2011	20"	40'	40'	Grouted In
Date Well Work Completed: 07/27/2012				
Verbal Plugging:	13 3/8"	606.97'	606.97'	415 sks
Date Permission granted on:				
Rotary Cable Rig X	9 5/8"	2027.2'	2027.2'	660 sks
Total Vertical Depth (feet): 7660'				
Total Measured Depth (feet): 15282'	5 1/2"	15461'	15461'	3168 sks
Fresh Water Depth (ft.): 50', 390'				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? No				
Coal Depths (ft.): N/A				
Void(s) encountered (N/Y) Depth(s)				

OPEN FLOW DATA

Producing formation MARCELLUS Pay zone depth (ft) 7756'-15461'
Gas: Initial production 1488 MCF/d Oil: Initial open flow * Bbl/d
Final open flow 5184 MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests 11 Hours
Initial Flowing Pressure 4725 psig (surface pressure) after 672.50 Hours

Second Producing formation Pay zone depth (ft)
Gas: Initial open flow * MCF/d Oil: Initial open flow * Bbl/d
Final open flow * MCF/d Final open flow * Bbl/d
Time of open flow between initial and final tests * Hours
Static rock Pressure * psig (surface pressure) after * Hours

* COMMINGLED WITH PREVIOUS FORMATIONS

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete

Signature

Date

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WELL: PHL4CHS (406157)

Were core samples taken? Yes ☐ No ☒ Were cuttings caught during drilling? Yes ☒ No ☐

Were ☐ Electrical ☐ Mechanical, ☒ or Geophysical logs recorded on this well?

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

PERFORATED INTERVALS, FRACTURING, OR STIMULATING:

7/5/2012 FRACED STAGE 1/23. PERFED MARCELLUS @ 15275'-15376' W/ 48 SHOTS. SAND 267,900#, AVG PSI 8628, AVG RATE 75.6.
7/6/2012 FRACED STAGE 2/23. PERFED MARCELLUS @ 15022'-15214' W/ 36 SHOTS. SAND 140,920#, AVG PSI 8661, AVG RATE 70.0.
7/7/2012 FRACED STAGE 3/23. PERFED MARCELLUS @ 14722'-14973' W/ 36 SHOTS. SAND 214,660#, AVG PSI 8494, AVG RATE 55.0.
7/7/2012 FRACED STAGE 4/23. PERFED MARCELLUS @ 14423'-14675' W/ 48 SHOTS. SAND 209,820#, AVG PSI 8371, AVG RATE 65.0.
7/8/2012 FRACED STAGE 5/23. PERFED MARCELLUS @ 14121'-14375' W/ 36 SHOTS. SAND 254,260#, AVG PSI 8425, AVG RATE 50.2.
7/8/2012 FRACED STAGE 6/23. PERFED MARCELLUS @ 13823'-14075' W/ 36 SHOTS. SAND 360,040#, AVG PSI 8577, AVG RATE 79.4.
7/15/2012 FRACED STAGE 7/23. PERFED MARCELLUS @ 13523'-13775' W/ 36 SHOTS. SAND 350,080#, AVG PSI 8049, AVG RATE 61.9.
7/16/2012 FRACED STAGE 8/23. PERFED MARCELLUS @ 13223'-13475' W/ 36 SHOTS. SAND 350,340#, AVG PSI 8481, AVG RATE 68.6.
7/17/2012 FRACED STAGE 9/23. PERFED MARCELLUS @ 12923'-13175' W/ 36 SHOTS. SAND 353,580#, AVG PSI 8126, AVG RATE 59.6.
7/17/2012 FRACED STAGE 10/23. PERFED MARCELLUS @ 12623'-12875' W/ 36 SHOTS. SAND 301,000#, AVG PSI 8692, AVG RATE 75.5.
7/18/2012 FRACED STAGE 11/23. PERFED MARCELLUS @ 12323'-12574' W/ 36 SHOTS. SAND 357,340#, AVG PSI 8619, AVG RATE 74.5.
7/19/2012 FRACED STAGE 12/23. PERFED MARCELLUS @ 11987'-12271' W/ 36 SHOTS. SAND 415,470#, AVG PSI 8510, AVG RATE 75.7.
7/20/2012 FRACED STAGE 13/23. PERFED MARCELLUS @ 11507'-11618' W/ 36 SHOTS. SAND 350,200#, AVG PSI 8624, AVG RATE 92.2.
7/25/2012 FRACED STAGE 14/23. PERFED MARCELLUS @ 11214'-11465' W/ 40 SHOTS. SAND 360,140#, AVG PSI 8430, AVG RATE 94.1.
7/25/2012 FRACED STAGE 15/23. PERFED MARCELLUS @ 10915'-11170' W/ 36 SHOTS. SAND 353,000#, AVG PSI 8513, AVG RATE 93.6.
7/25/2012 FRACED STAGE 16/23. PERFED MARCELLUS @ 10615'-10866' W/ 36 SHOTS. SAND 350,840#, AVG PSI 8630, AVG RATE 96.1.
7/26/2012 FRACED STAGE 17/23. PERFED MARCELLUS @ 10316'-10567' W/ 36 SHOTS. SAND 350,020#, AVG PSI 8482, AVG RATE 83.0.
7/26/2012 FRACED STAGE 18/23. PERFED MARCELLUS @ 10015'-10266' W/ 36 SHOTS. SAND 353,140#, AVG PSI 8528, AVG RATE 83.4.
7/27/2012 FRACED STAGE 19/23. PERFED MARCELLUS @ 9716'-9967' W/ 36 SHOTS. SAND 350,080#, AVG PSI 8641, AVG RATE 88.0.
7/27/2012 FRACED STAGE 20/23. PERFED MARCELLUS @ 9415'-9666' W/ 36 SHOTS. SAND 357,160#, AVG PSI 8586, AVG RATE 81.7.
7/27/2012 FRACED STAGE 21/23. PERFED MARCELLUS @ 9118'-9366' W/ 36 SHOTS. SAND 354,100#, AVG PSI 8483, AVG RATE 83.7.
7/27/2012 FRACED STAGE 22/23. PERFED MARCELLUS @ 8815'-9063' W/ 36 SHOTS. SAND 251,420#, AVG PSI 8379, AVG RATE 82.9.
7/27/2012 FRACED STAGE 23/23. PERFED MARCELLUS @ 8515'-8766' W/ 36 SHOTS. SAND 434,500#, AVG PSI 8500, AVG RATE 95.6.

FORMATIONS ENCOUNTERED:

Fill	0	40	Surface Rock	40	120	Sand&Shale	120	385	Sand	385	525
Sand&Shale	525	565	Shale	565	1905	RedRock Sand	1905	1965	RedRock	1965	2065
Shale	2065	2090	Sand&Shale	2090	2100	Shale Sand	2100	2120	Sandy Shale	2120	2180
RedRock	2180	2230	Sandy Shale	2230	2265	Shale	2265	2300	Sandy Shale	2300	2700
Shale	2700	4300	Sandy Shale	4300	5550	Shale	5550	7756			

GAMMA RAY/ FORMATION			
#PHL4CHS (406157)	TOPS		47-001-03249H
	TOP	BASE	
FORMATION TVD AT SURFACE LOCATION			
TULLY	7385	7488	
LTD	15488		
HOLE NOT LOGGED UNTIL KICKOFF POINT			
BURKETT	7382	7385	
HAMILTON	7488	7756	
MARCELLUS	7756		

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 11-5-2012
API #: 47-009-00113

Farm name: John Good BRK 8H Operator Well No.: 834044

LOCATION: Elevation: 1145 Quadrangle: Bethany

District: Buffalo County: Brooke
Latitude: 10910' Feet South of 40 Deg. 15 Min. 00 Sec.
Longitude 9510' Feet West of 80 Deg. 32 Min. 30 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	20"	125'	125'	505 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	345'	345'	392 Cu. Ft.
Inspector: Bill Hendershot	9 5/8"	1685'	1685'	769 Cu. Ft.
Date Permit Issued: 1-18-2012	5 1/2"	9800'	9800'	2380 Cu. Ft.
Date Well Work Commenced: 5-5-2012				
Date Well Work Completed: 8-12-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 5944'				
Total Measured Depth (ft): 9800'				
Fresh Water Depth (ft.): 300'				
Salt Water Depth (ft.): 1200'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 288'				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 8,178'-9,660'

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow Not Tested MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

11-9-2012
Date

2012 NOV 13 P 1:12
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Were core samples taken? Yes _____ No N Were cuttings caught during drilling? Yes Y No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list LWD GR from 5850-9,800' MD.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See attached)

Plug Back Details Including Plug Type and Depth(s):

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

(See attached)

Well Number and Name: 834044 John Good JR. BRK 8H

[illegible]

LATERAL WELLBORE (no vertical pilot hole associated with this well)

Maximum TVD of wellbore: 5939 ft TVD @ 9720 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
LS/SS/SH	0	0	288	288
PITTSBURG COAL	288	288	293	293
LS	293	293	420	420
SS	420	420	450	450
LS/SS	450	450	650	650
LS/SS/SH	650	650	810	810
SS/SH	810	810	1300	1300
BIG LIME	1300	1300	1390	1390
BIG INJUN (SS)	1390	1390	1510	1510
SHALE	1510	1510	5727	5688
GENESEO (SH)	5727	5688	5744	5701
TULLY (LS)	5744	5701	5833	5763
HAMILTON (SH)	5833	5763	6030	5858
MARCELLUS (SH)	6030	5858		
TD OF LATERAL			9800	5944

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 2012-10-11 Amended
API #: 4701705957

Farm name: John R. Davies et al Operator Well No.: 513370

LOCATION: Elevation: 1180 Quadrangle: West Union

District: Unknown County: Doddridge, WV
Latitude: 39.27211 Feet South of _____ Deg. _____ Min. _____ Sec.
Longitude: -80.77173 Feet West of _____ Deg. _____ Min. _____ Sec.

Company: EQT Production Company

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
EQT Plaza, Suite 1700				
625 Liberty Avenue, Pittsburgh, PA 15222	20	40	40	49.6
Agent: Cecil Ray	13 3/8	1,147	1,147	979.8
Inspector: David Scrange	9 5/8	3,192	3,192	1,363.53
Date Permit Issued: 2010-06-18	5 1/2	9,658	9,658	1,828.8
Date Well Work Commenced: 2010-07-16				
Date Well Work Completed: 2011-05-30				
Verbal Plugging: N/A				
Date Permission granted on: N/A				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input checked="" type="checkbox"/>				
Total Vertical Depth (ft): 6,647.85				
Total Measured Depth (ft): 9,656				
Fresh Water Depth (ft.): FW @ 66,157,268,343				
Salt Water Depth (ft.): None Encountered				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): 60, 205, 403, 675				
Void(s) encountered (N/Y) Depth(s) N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow 2,256 MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure 2,368 psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

Mark Best
Signature

2012-11-20
Date

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2012 NOV 30 1:10
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes _____ No X

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list Geophysical

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

See Attachment

Plug Back Details Including Plug Type and Depth(s): 3246Ft 104 Sacks Plugcem, 3030Ft 104 Sacks Plugcem
3177, Cast Iron Bridge Plug

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth
Surface: _____

Sand / 0 / 55 / 55 -- Shale / 55 / 60 / 5 -- Coal / 60 / 62 / 2 -- Sand / 62 / 100 / 38 -- Red Rock / 100 / 108 / 8 --
Shale / 108 / 205 / 97 -- Coal / 205 / 210 / 5 -- Sand / 210 / 240 / 30 -- Red Rock / 240 / 250 / 10 -- Red Rock / 250 / 265 / 15 --
Sand / 265 / 280 / 15 -- Red Rock / 280 / 290 / 10 -- Sand and Shale / 290 / 330 / 40 -- Red Rock / 330 / 350 / 20 --
Sand and Shale / 350 / 403 / 53 -- Coal / 403 / 406 / 3 -- Sand and Shale / 406 / 675 / 269 -- Coal / 675 / 677 / 2 --
Sand and Shale / 677 / 983 / 306 --Shale / 750 / 840 / 90 -- Red Rock / 840 / 860 / 20 -- Sand / 860 / 1,070 / 210 --
Red Rock / 1,070 / 1,085 / 15 -- Sand / 1,085 / 3,222 / 2,137 -- WARREN / 3,222.06 / 3,304.96 / 82.9 -- SPEECHLEY / 3,304.96 / 3,988.6 / 683.64 --
BALLTOWN B / 3,988.6 / 4,175.98 / 187.38 -- BRADFORD / 4,175.98 / 4,450.42 / 274.44 -- RILEY / 4,450.42 / 4,887.17 / 436.75 --
BENSON / 4,887.17 / 5,140.73 / 253.56 -- ALEXANDER / 5,140.73 / 6,249.28 / 1,108.55 -- SONYEA / 6,249.28 / 6,483.95 / 234.67 --
MIDDLESEX / 6,483.95 / 6,536.19 / 52.24 -- GENESSEE / 6,536.19 / 6,613.69 / 77.5 -- GENESEO / 6,613.69 / 6,642.8 / 29.11
TULLY / 6,642.8 / 6,667.05 / 24.25 -- HAMILTON / 6,667.05 / 6,682.09 / 15.04 -- MARCELLUS BLK SHALE / 6,682.09 / 6,697.36 / 15.27 --

EQT WR-35	Completion	Attachment	Well	Treatment	Summary
Stage 1	Formation MARCELLUS	Frac Type Slickwater			
Date 4/1/2011	From / To 9393 - 9635	# of perfs	BD Press 6,424.00	ATP Psi 7,493.00	SIP Detail 5 Min: 2628
Avg Rate 95.10	Max Press PSI 9,077.00	ISIP 3,122.00	Frac Gradient 0.9		10 Min: 2496 15 Min: 2417
Sand Proppant 407,407.00	Water-bbl 9,903.00	SCF N2	Acid-Gal 2,000.00		
Stage 2	Formation MARCELLUS	Frac Type Slickwater			
Date 4/1/2011	From / To 9093 - 9335	# of perfs	BD Press 7,721.00	ATP Psi 7,452.00	SIP Detail 5 Min: 2825
Avg Rate 97.20	Max Press PSI 8,630.00	ISIP 3,323.00	Frac Gradient 0.93		10 Min: 2669 15 Min: 2574
Sand Proppant 398,724.00	Water-bbl 9,974.00	SCF N2	Acid-Gal 2,000.00		
Stage 3	Formation MARCELLUS	Frac Type Slickwater			
Date 4/1/2011	From / To 8793 - 9033	# of perfs	BD Press 6,605.00	ATP Psi 7,255.00	SIP Detail 5 Min: 2768
Avg Rate 99.60	Max Press PSI 8,938.00	ISIP 3,291.00	Frac Gradient 0.93		10 Min: 2600 15 Min: 2505
Sand Proppant 409,790.00	Water-bbl 9,908.00	SCF N2	Acid-Gal 2,000.00		

EQT WR-35	Completion	Attachment	Well	Treatment	Summary
Stage	Formation	Frac Type			SIP Detail 5 Min: 2791 10 Min: 2636 15 Min: 2566
4	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	
4/2/2011	8493 - 8733		6,774.00	6,690.00	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
101.90	8,251.00	3,275.00	0.93		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
404,230.00	9,934.00		2,000.00		
Stage	Formation	Frac Type			
5	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	
4/2/2011	8193 - 8435		5,684.00	6,433.00	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
100.60	7,761.00	3,388.00	0.94		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
399,941.00	10,024.00		2,000.00		
Stage	Formation	Frac Type			SIP Detail 5 Min: 3194 10 Min: 3031 15 Min: 2935
6	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	
4/4/2011	7893 - 8135		6,307.00	6,955.00	
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
100.30	8,277.00	3,879.00	1.02		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
399,240.00	9,909.00		2,000.00		

EQT WR-35	Completion	Attachment	Well	Treatment	Summary
Stage	Formation	Frac Type			
7	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
4/4/2011	7593 - 7835		6,058.00	7,086.00	5 Min: 2983
					10 Min: 2801
					15 Min: 2695
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
100.20	8,927.00	3,482.00	0.96		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
395,550.00	9,790.00		2,000.00		
Stage	Formation	Frac Type			
8	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
4/4/2011	7293 - 7533		6,883.00	6,555.00	5 Min: 3002
					10 Min: 2844
					15 Min: 2748
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
101.00	7,747.00	3,486.00	0.96		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
401,293.00	9,650.00		2,000.00		
Stage	Formation	Frac Type			
9	MARCELLUS	Slickwater			
Date	From / To	# of perfs	BD Press	ATP Psi	SIP Detail
4/5/2011	6993 - 7233		7,281.00	6,585.00	5 Min: 2927
					10 Min: 2799
					15 Min: 2728
Avg Rate	Max Press PSI	ISIP	Frac Gradient		
98.82	7,862.00	3,368.00	0.94		
Sand Proppant	Water-bbl	SCF N2	Acid-Gal		
401,466.00	9,704.00		2,000.00		

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

Well Operator's Report of Well Work

Farm Name: Kanawha County Parks and Recreation Date: 10/18/2012
Operator Well No.: Coonskin #1 API #: 47-3906336

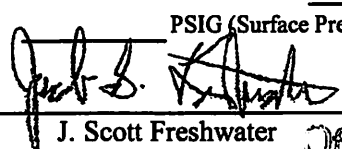
LOCATION

Elevation: 642 Quadrangle: Big Chimney
District: Elk County: Kanawha
Latitude: 38.3867443 NAD 83
Longitude: 81.56066782 NAD 83

WELL INFORMATION

Company:	Reserve Oil and Gas, Inc.	Casing &	Used in	Left in	Cement Fill up
Address:	929 Charleston Road	Tubing:	Drilling:	Well:	Cu. Ft.
	Spencer, WV 25276	13 3/8"	17.00	17.00	cts
Agent:	J. Scott Freshwater	9 5/8"	336.30	336.30	cts
Inspector:	Terry Urban	7"	1607.95	1607.95	cts
Date Permit Issued:	3/20/2012	4 1/2"	4391.35	4391.35	125 sks
Date Work Commenced:	4/30/2012				
Date Work Completed:	5/31/2012				
Verbal Plugging:					
Date Permission Granted:					
Rotary Rig:	CSi Rig #10				
Cable Rig:					
Total Vertical Depth (FT):	4420	Total Measured Depth (FT): 4420			
Fresh Water Depth (FT):	40				
Salt Water Depth (FT):	N/A				
Is coal being mined in area (N/Y):	No				
Coal Depths (FT):	210 to 215	Void(s) Encountered (N/Y) / Depth(s): N/A			

OPEN FLOW DATA

Producing Formation:	Devonian Shale	Pay Zone Depth (FT):	2925	to	4360
Gas		Oil			
Initial Open Flow:	18.2	Initial Open Flow:	N/A		
Final Open Flow:	189	Final Open Flow:	N/A		
Time of open flow between initial and final tests:			720	Hours.	
Static Rock Pressure:	469 PSIG (Surface Pressure) after:		24	Hours.	
2nd Producing Formation:		Pay Zone Depth (FT):		to	
Gas		Oil			
Initial Open Flow:		Initial Open Flow:			
Final Open Flow:		Final Open Flow:			
Time of open flow between initial and final tests:				Hours.	
Static Rock Pressure:		PSIG (Surface Pressure) after:		Hours.	
Signed:			10/18/2012		
By:	J. Scott Freshwater		Date:		

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

WV Department of
Environmental Protection

6336

FORMATIONS

Water:		
Depth:	Amount:	Type:
40	damp	freshwater
n/a		saltwater

Gas Checks:	
Depth:	Remarks:
1760	gas show
3700	gas show

Oil Shows:	
Depth:	Remarks:
n/a	drill pipe showed crude oil when TOH

Perforations:		Stimulation:	
Stage 1:			
Number of Perforations:	40	Remarks:	Totals
Depth From (FT):	3770	N2	2,003,300 SCF
Depth To (FT):	4360	7 1/2% HCL Acid	1,500 Gallons
		1-7L - Iron control Additive	3 Gallons
		Cla Chek LP - Permanent Clay Stabilizer	2 Gallons
Stage 2:			
Number of Perforations:	40	Unihib-A - Low Temp Corrosion Inhibitor	1 1/2 Gallons
Depth From (FT):	2925	3 3/4" #5 Frac Ball	1 Each
Depth To (FT):	3586	1.3 S.G. 7/8" RCN Ball Sealers	85 Each
		Perforation Size	0.39 Inches

6336

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

001 2 2 12

Well Operator's Report of Well Work

WV Department of
Environmental Protection

Farm Name: Flinner, David
Operator Well No.: Copenhaver #1

Date: 10/18/2012
API #: 47-3906338

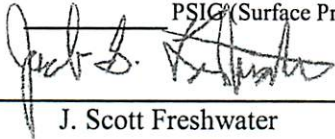
LOCATION

Elevation: 920 Quadrangle: Big Chimney
District: Elk County: Kanawha
Latitude: 38.4532008 NAD 83
Longitude: 81.5486806 NAD 83

WELL INFORMATION

Company:	Reserve Oil and Gas, Inc.	Casing & Tubing:	Used in	Left in	Cement Fill up
Address:	<u>929 Charleston Road</u> <u>Spencer, WV 25276</u>	<u>13 3/8"</u>	<u>21.20</u>	<u>21.20</u>	<u>Cu. Ft.</u>
Agent:	<u>J. Scott Freshwater</u>	<u>9 5/8"</u>	<u>294.85</u>	<u>294.85</u>	<u>cts</u>
Inspector:	<u>Terry Urban</u>	<u>7"</u>	<u>1859.90</u>	<u>1859.90</u>	<u>cts</u>
Date Permit Issued:	<u>4/27/2012</u>	<u>4 1/2"</u>	<u>4630.35</u>	<u>4630.35</u>	<u>175 sks</u>
Date Work Commenced:	<u>5/20/2012</u>				
Date Work Completed:	<u>6/13/2012</u>				
Verbal Plugging:					
Date Permission Granted:					
Rotary Rig:	<u>CSi Rig #10</u>				
Cable Rig:					
Total Vertical Depth (FT):	<u>4674</u>	Total Measured Depth (FT): <u>4674</u>			
Fresh Water Depth (FT):	<u>66</u>				
Salt Water Depth (FT):	<u>1080</u>				
Is coal being mined in area (N/Y):	<u>No</u>				
Coal Depths (FT):	<u>N/A</u>	Void(s) Encountered (N/Y) / Depth(s): <u>N/A</u>			

OPEN FLOW DATA

Producing Formation:	<u>Devonian Shale</u>	Pay Zone Depth (FT):	<u>3120</u>	to	<u>4604</u>
Gas		Oil			
Initial Open Flow:	<u>21</u>	Initial Open Flow:	<u>N/A</u>		
Final Open Flow:	<u>258</u>	Final Open Flow:	<u>N/A</u>		
Time of open flow between initial and final tests:	<u>576</u> Hours.				
Static Rock Pressure:	<u>502</u> PSIG (Surface Pressure) after:	<u>24</u> Hours.			
2nd Producing Formation:		Pay Zone Depth (FT):		to	
Gas		Oil			
Initial Open Flow:		Initial Open Flow:			
Final Open Flow:		Final Open Flow:			
Time of open flow between initial and final tests:	Hours.				
Static Rock Pressure:	PSIG (Surface Pressure) after:	Hours.			
Signed:			<u>10/18/2012</u>		
By:	<u>J. Scott Freshwater</u>		Date:		

6338

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Continued

[illegible]

Water:		
Depth:	Amount:	Type:
66	damp	fresh water
180	1/2" stream	fresh water
1080	soap on hole	salt water

[illegible]

Oil Shows:	
Depth:	Remarks:

Perforations:

Stage 1:

Number of Perforations:

Depth From (FT):

Depth To (FT):

Stimulation:

Remarks: Totals

2,002,900 scf N2

1500 gallons 7 1/2% HCL Acid

3 gallons I-7L - Iron control Additive

2 gallons Cla Chek LP - Permanent Clay Stabilizer

1 1/2 gallons Unihib-G

1 3 3/4" #5 Frac Ball

102 1.1 S.G. 7/8" RCN Ball Sealers

Stage 2:

Number of Perforations:

Depth From (FT):

Depth To (FT):

Were Core Samples Taken (N/Y): No

Were Cuttings Caught During Drilling (N/Y): No

Were Geophysical Logs Recorded on This Well (N/Y): Yes

Electrical (N/Y): Yes

Mechanical (N/Y): Yes

6338

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 8-28-2012
API #: 47-051-01430

Farm name: Michael Southworth 8H Operator Well No.: 832806

LOCATION: Elevation: 1180' Quadrangle: Valley Grove

District: Sandhill County: Marshall
Latitude: 8820' Feet South of 40 Deg. 02 Min. 30 Sec.
Longitude 10500' Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P.O. Box 18496				
Oklahoma City, OK 73154-0496	20"	100'	100'	303 Cu. Ft.
Agent: Eric Gillespie	13 3/8"	800'	800'	875 Cu. Ft.
Inspector: David Scranage	9 5/8"	1980'	1980'	707 Cu. Ft.
Date Permit Issued: 1-13-2011	5 1/2"	14054'	14054'	3632 Cu. Ft.
Date Well Work Commenced: 2-20-2011				
Date Well Work Completed: 5-2-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6486'(cement plug 5538')				
Total Measured Depth (ft): 14058'				
Fresh Water Depth (ft.): 300'				
Salt Water Depth (ft.): 950'				
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.): 743'				
Void(s) encountered (N/Y) Depth(s) Y 743'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,755'-13,915'

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow 1,684* MCF/d Final open flow 104 Bbl/d

Time of open flow between initial and final tests 32 Hours *Calculated

Static rock Pressure 4,214* psig (surface pressure) after Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlow Williams
Signature

8-28-2012
Date

PAID
WV DEPT OF ENVIRONMENTAL PROTECTION

AUG 30 2012

WV Department of
Environmental Protection

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____

Pilot hole: MWD GR, Resistivity, Nuclear, Spectral GR, Sonic, Borehole image. Lateral: MWD GR

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Cement plug up to 5538 ft MD / 5537 ft TVD

Formations Encountered: _____ Top Depth _____ / _____ Bottom Depth _____

Surface: _____

(See Attached)

PAUL M. HARRIS
Chief of Division

AUG 30 2012

WV Department of
Environmental Protection

VERTICAL PILOT HOLE

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SS	0	0	120	119
SS/SHALE	120	119	160	159
SS	160	159	220	219
SS/SHALE	220	219	280	279
SS	280	279	370	369
SS/LS	370	369	670	669
COAL	670	669	682	681
LS/SS	682	681	810	809
SS/SLTSTN	810	809	920	919
SS	920	919	1557	1556
MAXTON	1557	1556	1765	1764
BIG LIME	1765	1764	1839	1838
BIG INJUN	1839	1838	1965	1964
SS/SHALE	1965	1964	2070	2069
SHALE	2070	2069	6210	6209
GENESEO	6210	6209	6231	6230
TULLY	6231	6230	6263	6262
HAMILTON	6263	6262	6368	6367
MARCELLUS	6368	6367	6420	6419
ONONDAGA	6420	6419	6438	6437
PILOT HOLE TD	6438	6437		
PLUG BACK DEPTH	5538	5537		

LATERAL WELLBORE

Maximum TVD of wellbore: 6486 ft TVD @ ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SHALE	5538	5538	6275	6214

FOR THE STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Office of the State Engineer

AUG 30 2012

NY Department of
Environmental Conservation
Office of the State Engineer

GENESEO	6275	6214	6308	6234
TULLY	6308	6234	6371	6268
HAMILTON	6371	6268	6615	6369
MARCELLUS	6615	6369	14054	6482
TD	14054	6482		0

PAID BY THE STATE OF NEW YORK
 DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 OFFICE OF THE ATTORNEY GENERAL

AUG 30 2012

NY Department of
 Environmental Conservation

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas
Well Operator's Report of Well Work

DATE: 8-9-2012
API #: 47-051-01500

Farm name: Michael Southworth MSH 3H Operator Well No.: 834166

LOCATION: Elevation: 1270' Quadrangle: Valley Grove

District: Sand Hill County: Marshall
Latitude: 8820' Feet South of 40 Deg. 02 Min. 30 Sec.
Longitude 10500' Feet West of 80 Deg. 35 Min. 00 Sec.

Company: Chesapeake Appalachia, L.L.C.

Address: P.O. Box 18496	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Oklahoma City, OK 73154-0496	20"	100'	100'	Driven
Agent: Eric Gillespie	13 3/8"	803'	803'	881 Cu. Ft.
Inspector: Bill Hendershot & Derek Haught	9 5/8"	2120'	2120'	887 Cu. Ft.
Date Permit Issued: 11-16-2011	5 1/2"	13307'	13307'	3407 Cu. Ft.
Date Well Work Commenced: 3-10-2012				
Date Well Work Completed: 5-3-2012				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 6403'				
Total Measured Depth (ft): 13307'				
Fresh Water Depth (ft.): 300'				
Salt Water Depth (ft.): 950'				
Is coal being mined in area (N/Y)? Y				
Coal Depths (ft.): 753'				
Void(s) encountered (N/Y) Depth(s) Y 753'				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 6,732'-13,176'
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 2,763* MCF/d Final open flow 195 Bbl/d
Time of open flow between initial and final tests 108 Hours *Calculated
Static rock Pressure 4,139* psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

FILED
MAR 30 2012

AUG 30 2012

WVD Department of
Environmental Protection

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Marlene Williams
Signature

8-29-2012
Date

Were core samples taken? Yes _____ No X

Were cuttings caught during drilling? Yes X No _____

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list _____
MWD GR in the lateral. _____

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:

(See Attached)

Plug Back Details Including Plug Type and Depth(s):

Formations Encountered:	Top Depth	/	Bottom Depth
Surface:			

See attached

FILED
AUG 30 2012
OFFICE OF THE SECRETARY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

AUG 30 2012

WV Department of
Environmental Protection

PERFORATION RECORD ATTACHMENT

Well Number and Name: 834166 Michael Southworth MSH 3H

PERFORATION RECORD			STIMULATION RECORD							
	Interval Perforated					Fluid		Propping Agent		Average Injection
Date	From	To	Date	Interval Treated		Type	Amount	Type	Amount	
4/19/2012	12,742	13,176	4/25/2012	12,742	13,176	Sik wtr	11,781	Sand	660,420	78.0
4/26/2012	12,100	12,677	4/26/2012	12,100	12,677	Sik wtr	12,336	Sand	661,240	80.0
4/26/2012	11,429	12,006	4/26/2012	11,429	12,006	Sik wtr	12,203	Sand	581,140	77.0
4/26/2012	10,758	11,335	4/27/2012	10,758	11,335	Sik wtr	12,270	Sand	659,360	78.0
4/27/2012	10,087	10,664	4/29/2012	10,087	10,664	Sik wtr	12,927	Sand	661,520	79.0
4/29/2012	9,416	9,993	4/29/2012	9,416	9,993	Sik wtr	11,607	Sand	661,100	78.0
4/29/2012	8,745	9,323	5/1/2012	8,745	9,323	Sik wtr	12,186	Sand	659,780	80.0
5/1/2012	8,074	8,652	5/1/2012	8,074	8,652	Sik wtr	12,164	Sand	659,880	80.0
5/1/2012	7,403	7,981	5/3/2012	7,403	7,981	Sik wtr	12,163	Sand	657,960	80.0
5/3/2012	6,732	7,310	5/3/2012	6,732	7,310	Sik wtr	11,794	Sand	661,340	80.0

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LATERAL WELLBORE**Maximum TVD of wellbore:** 6403 ft TVD @ 6766 ft MD

Formation/Lithology	Top Depth, MD (ft)	Top Depth, TVD (ft)	Bottom Depth, MD (ft)	Bottom Depth, TVD (ft)
SH/SS	0	0	100	100
SS/SLTSTN	100	100	430	430
SS	430	430	524	524
SS/SLTSTN	524	524	690	690
SLTSTN/SS	690	690	724	724
COAL	724	724	738	738
SLTSTN	738	738	824	824
SS/SLTSTN	824	824	844	844
SS	844	844	912	912
SS/SLTSTN	912	912	1420	1420
COAL	1420	1420	1448	1448
SS	1448	1448	1725	1725
BIG INJUN	1725	1725	1975	1975
SH/SS	1975	1975	2050	2050
SS/SH	2050	2050	2080	2080
SS	2080	2080	2320	2320
SH	2320	2320	3042	3042
SS	3042	3042	3102	3102
SS/SLTSTN	3102	3102	3400	3400
SH/SS	3400	3400	4606	4606
SH/SLTSTN	4606	4606	4706	4706
SH/SS	4706	4706	5628	5628
SH	5628	5628	6248	6214
GENESEO	6248	6214	6320	6266
TULLY	6320	6266	6390	6311
HAMILTON	6390	6311	6474	6351
MARCELLUS	6474	6351	13307	6334
TD	13307	6334		0

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